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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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TRAN, HENRY N

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 12/03/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>  09/468,581	<b>Applicant(s)</b>  MINAMI ET AL.
	<b>Examiner</b>  HENRY N. TRAN	<b>Art Unit</b>  2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 20 December 1999 .

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-19 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 20 December 1999 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)      4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)      5)  Notice of Informal Patent Application (PTO-152)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.      6)  Other: \_\_\_\_\_

## **DETAILED ACTION**

This Application has been examined. The original claims 1-19 are pending. The examination results are as following.

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The examiner has considered the references listed in the information disclosure statement (IDS) filed 7/21/00 (Paper No. 3) (see attached form PTO-1449).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. **Claims 1-3, 9, 11-13, and 16-18** are rejected under 35 U.S.C. 102(e) as being anticipated by Gouko (U.S. Patent 6,222,507).

5. **Regarding claim 1**, Gouko teaches a multi-monitor (a personal computer having a plurality of display panels (see col. 1, lines 5-6), comprising: a first display device **2** (Gouko says the main panel 2 as a primary display panel) having a display screen **2a** (a display surface 2a); a second display device **3** (Gouko says the sub panel 3 as a secondary display panel) having a display screen smaller than the first display device **2** (see FIG. 1; col. 3, lines 23-28, and line 37); and a supporting mechanism **6**, **7**, and **9** (a pinion 6, a rack 7, and hinge mechanism 9) which is mountable on an outside portion of the first display device **2**, and support the second display device **3** rotatably about a first axis **9a** and a second axis **9b** intersection the first axis (Gouko says that the hinge mechanism 9 includes two axes 9a and 9b; and the sub panel 3 is rotatable around the first axis 9a as depicted by a circular 10a, and is rotatable around the second axis as depicted by a circular broken line 10b) (see FIGS. 2, 4 and 5; abstract; col. 3, lines 41-46; and col. 4, lines 15-26).

6. **Regarding claim 2**, Gouko shows the first axis **9a** is parallel with a horizontal direction of the display screen **2a** of the first display device **2**, and the second axis **9b** is parallel with a vertical direction of the display screen **2a** of the first display device **2** (see references cited above). Claim 2 is dependent upon claim 1, and is rejected on the same reasons set forth in claim 1, and by the reasons noted above.

7. **Regarding claim 3**, Gouko further teaches the supporting mechanism **6**, **7**, and **9** (a pinion 6, a rack 7, and hinge mechanism 9) includes: a first support member **9** (a hinge mechanism 9) which supports the second display device **3** rotatably about the first and the

second axes **9a** and **9b** (see references cited above); and a second support member **6** and **7** (a pinion **6** and a rack **7**) mountable on an outside portion **2b** (a back surface **2b**) of the first display device **2**, and supports the first support member **9** slidably in parallel with the horizontal direction of the display screen **2a** of the first display device **2** (Gouko shows the pinion **6** and the rack **7** are mounted in the back portion **2b** of the first display device **2**; the combination of the pinion **6** and the rack **7** supports the hinge mechanism **9**, which is mounted to the second display device **3**, slidably in parallel with the horizontal direction of the display screen **2a** of the first display device **2**; Gouko says the sub panel is slid horizontally, as depicted by a straight line having arrows in both ends thereof, into the space in the rear of the first display device **2**) (see FIGS. 2 and 4; and col. 3, lines 39-46; and col. 4, lines 15-26). Claim 3 is dependent upon claim 2, and is rejected on the same reasons set forth in claim 2, and by the reasons noted above.

8. **Regarding claim 9**, Gouko also teaches the multi-monitor further comprising one more display device **4** (a secondary display panel **4**) having a display screen smaller than that of the first display device (see FIG. 5, which shows the display screens of display devices **3** and **4**, each display screen is one half of the display screen **2a** of the first display device **2**; also, col. 2, lines 1-4; and col. 3, lines 25-27). Claim 9 is dependent upon claim 1, and is rejected on the same reasons set forth in claim 1, and by the reasons noted above.

9. **Regarding claim 11**, which is similar to claim 1, Gouko teaches an auxiliary monitor (a personal computer having a plurality of display panels (see col. 1, lines 5-6), comprising: a main body **3** having a display screen (Gouko calls a secondary display device or the sub panel **3** having a display screen); and a supporting mechanism **6**, **7**, and **9** (a pinion **6**, a rack **7**, and hinge mechanism **9**) which is mountable on an outside portion of a mother monitor **2** having a display

screen **2a** larger than that of the main body (FIGS. 1 and 5, show that the display screen **2a** of the mother monitor **2** is larger than the display screen of the main body **3**), and supports the main body **3** rotatably about the first axis **9a** and the second axis **9b** intersecting the first axis (Gouko says that the hinge mechanism **9** includes two axes **9a** and **9b**; and the sub panel **3** is rotatable around the first axis **9a** as depicted by a circular line **10a**, and is rotatable around the second axis **9b** as depicted by a circular broken line **10b**) (See the above cited references; also, FIGS. 2, 4 ; col. 3, lines 23-28, and line 37, lines 41-46; and col. 4, lines 15-26).

**Note:** The examiner has led to recognized that the claim 11 is similar to claim 1, which is rephrased to claim an auxiliary monitor instead of a multi-monitor, a main body having a display screen instead of the second display device having a display screen, a mother monitor having a display screen instead of the first display device having a display screen, and the display screen of the mother monitor is larger than that of the main body (which is more specific than that of claim 1).

10. **Regarding claim 12,** Gouko teaches the first axis **9a** is parallel with a horizontal direction of the display screen **2a** of the mother monitor **2**, and the second axis **9b** is parallel with a vertical direction of the display screen **2a** of the mother monitor **2** (see references cited above). Claim 12 is dependent upon claim 11, and is rejected on the same reasons set forth in claim 11, and by the reasons noted above.

11. **Regarding claim 13,** Gouko further teaches the supporting mechanism **6**, **7**, and **9** (a pinion **6**, a rack **7**, and hinge mechanism **9**) includes: a first support member **9** (a hinge mechanism **9**) which supports the main body **3** rotatably about the first and the second axes **9a** and **9b** (see references cited above); and a second support member **6** and **7** (a pinion **6** and a rack

7) mountable on an outside portion **2b** (a back surface 2b) of the mother monitor **2**, and supports the first support member **9** slidably in parallel with the horizontal direction of the display screen **2a** of the mother monitor **2** (Gouko shows the pinion 6 and the rack 7 are mounted in the back portion 2b of the mother monitor 2; the combination of the pinion 6 and the rack 7 supports the hinge mechanism 9, which is mounted to the main body 3, slidably in parallel with the horizontal direction of the display screen 2a of the mother monitor 2; Gouko says the sub panel 3 is slid horizontally, as depicted by a straight line having arrows in both ends thereof, into the space in the rear of the mother monitor 2) (see FIGS. 2 and 4; and col. 3, lines 39-46; and col. 4, lines 15-26). Claim 13 is dependent upon claim 12, and is rejected on the same reasons set forth in claim 12, and by the reasons noted above.

12. **Regarding claim 16**, Gouko teaches a monitor supporter **6**, **7**, and **9** (a pinion 6, a rack 7, and hinge mechanism 9) comprising: a first support member **7** and **9** (a rack 7 and a hinge mechanism 9) which supports an auxiliary display device **3** (a secondary display device or a sub panel 3) rotatably about the first and the second axes **9a** and **9b** (see references cited above); and a second support member **6** (a pinion 6) which is mountable on an outside portion **2b** (a back surface 2b) of the mother display device **2** (a primary display device or a main panel 2) having a larger display screen **2a** (a display surface 2a) than that of the auxiliary display device **3** (see FIG. 5, which shows the display device 3 having a display screen which is one-half of the display screen 2a of the first display device 2; also, col. 3, lines 25-27) and supports the first support member **7** and **9** (See FIG. 4).

13. **Regarding claim 17**, Gouko further teaches the first support member **7** and **9** slidably on the second support member **6** (FIG. 4 shows the pinion 6 is mounted in the back portion 2b of the

mother display device 2; and the first support member 7 and 9 is slidable on the second support member 6). Claim 17 is dependent upon claim 16, and is rejected on the same reasons set forth in claim 16, and by the reason noted above.

14. **Regarding claim 18**, Gouko further teaches that the first axis 9a is parallel with a horizontal direction of the display screen 2a of the mother display device 2, and the second axis 9b is parallel with a vertical direction of the display screen 2a of the mother display device 2 (See the rotation directions depicted as 10a and 10b in FIG. 4; wherein 10a is the rotation direction parallel with the first axis 9a which is a horizontal direction of the display screen 2a of the mother display device 2, and 10b is the rotation direction parallel with the second axis 9b which is a vertical direction of the display screen 2a of the mother display device 2). Claim 18 is dependent upon claim 16, and is rejected on the same reasons set forth in claim 16, and by the reasons noted above.

*Claim Rejections - 35 USC § 103*

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. **Claims 4, 6, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gouko (U.S. Patent 6,222,507) in view of Crossland et al (U.S. Patent 4,720,781, hereinafter referred to as "Crossland").

17. **Regarding claim 4**, Gouko teaches generally all except for the second display device is driven in accordance with the same operation system as the first display device. Crossland

teaches a multi-monitor device having a first display device 2 and a second display device 3 (Crossland calls an office terminal having a first and a second flat panel display modules 2 and 3. See FIG. 1), and the first and the second display devices are driven by an operating system, for example MIRTOS (Crossland says an operating system, e.g. MIRTOS, is used to support module software driven the display modules) (see Col. 4, lines 6-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings as taught by Crossland using the same operating system for driving display modules of a display system in the device as of Gouko because this would greatly increased efficiency and flexibility (see Crossland, col. 3, lines 19-21). Claim 4 is dependent upon claim 1, and is rejected on the same reasons set forth in claim 1, and by the rational discussed above.

18. **Regarding claim 6**, Gouko further teaches an image signal output device (the personal computer) which outputs image signals to be displayed on the display screens of the first and the second display devices (Gouko says the personal computer provides a plurality of images to be displayed in a plurality of display panels. Accordingly, it could be said that the personal computer outputs image signals to be displayed on the display screens of the first and the second display devices) (see Col. 5, lines 29-31, and lines 41-43). Further, Crossland shows an image signal output device 13 (a controller or a central processor 13) which outputs image signals to be displayed on the display screens of the first and the second display devices 12, 16 using display interface 11 and 15 (See FIG. 6; col. 3, lines 12-16, lines 58-63). Claim 6 is dependent upon claim 4, and is rejected on the same reasons set forth in claim 4, and by the reasons noted above.

19. **Regarding claim 14**, which is dependent upon claim 11, and includes the same claimed element of claim 4, and is rejected on the same reasons set forth in claims 4 and 11.

20. **Claims 10, 15, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gouko (U.S. Patent 6,222,507) in view of Fowler et al (U.S. Patent 6,302,612, hereinafter referred to as “Fowler”).

21. **Regarding claim 10**, Gouko teaches a multi-monitor (a personal computer having a plurality of display panels) including the supporting mechanism 6, 7, and 9 having the rack 7 mounted on the second display device 3, while the pinion 6 provided on the first display device 2, the pinion 6 and the rack 7 being adjusted to be operable as rack and pinion mechanism for sliding the second display panel 3 into its space (see col. 2, lines 8-14). The teachings has led one to recognized that the pinion 6 and the rack 7 are mounted separately on the first display device 2 and the second display device 3, respectively; and thereafter they are connectedly mounted with the hinge mechanism 9 for sliding the second display device 3 into its place (See FIG. 4). However, Gouko does not teach expressly that the supporting mechanism is detachably mountable on the first display device. Fowler teaches a multi-monitor (a multiple display configuration) (see FIG. 2; col. 3, line 4) including a first display device 131 (the primary LCD 131) hinged mounted to base computer 136 (a base 136); a second display device 132 (a side panel display 132); and a supporting mechanism 134, 135, 139 (a socket 134, a ball 135, and a plastic clip 139) (See FIG. 12; col. 4, lines 28-33), wherein the socket 134 comprising two flanged hemispheres 141 and 142 which are detachably mountable on the first display device 131 (Fowler says the two flanged hemispheres 141 and 142 are assembled and tightened by screws. This teaching is read on the claimed limitation “detachably mountable”; because the screws can be used to attach ably mount and detach ably mount things together) (See FIG. 18; and col. 5, lines 5-8). It would have been obvious to one of ordinary skill in the art at the time the invention

was made to utilize the teachings of Fowler in the device of Gouko for producing the claimed invention because this would provide an improved viewing screen (see Fowler, col. 1, line 42) with ease of assembly and easy of repair. Claim 10 is dependent upon claim 1, and is rejected on the same reasons set forth in claim 1, and by the rational discussed above.

22. **Regarding claim 15**, which is dependent upon claim 11, and includes the claimed

element of claim 10, and is rejected on the same basis set forth in claims 10 and 11.

23. **Regarding claim 19**, which is dependent upon claim 16, and includes the claimed

element of claim 10, and is rejected on the same basis set forth in claims 10 and 16.

24. **Claims 7 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gouko (U.S. Patent 6,222,507) in view of Crossland et al (U.S. Patent 4,720,781) (hereinafter referred to as “Gouko-Crossland”) as applied to claims 1, 4, 6 above, and further in view of Fowler (U.S. Patent 6,302,612).

25. **Regarding claim 7**, Gouko-Crossland teaches a multi-monitor as discussed in claims 1,

4, and 6 above. However, Gouko-Crossland do not teach expressly the multi-monitor further

comprising a first wiring which connects the image signal output device with the first display

device, and a second wiring which connects the image signal output device with the second

display device. Fowler teaches a multi-monitor including a first display device 110 (the primary

LCD 110) hinged mounted to base computer 100 (a base 100), and a second display device 111

(a hidden secondary LCD 111) (See FIGS. 9 and 10; and col. 4, lines 4-6). Fowler further

teaches the use of a first wiring 109 (a ribbon wire 109) which connects the image signal output

device 105 (a base 105) with a first display device 101 (a primary LCD 101) (See FIG. 8; col. 3,

line 2, and lines 63-64), and a second wiring 127 (a connecting wire 127) which connects the image signal output device 100 with the second display device 111 (See FIG. 11; col. 4, lines 17-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the use of the first and the second wirings as taught by Fowler in the device of Gouko-Crossland because this would provide a convenient viewing screen capable of providing more flexibility and more freedom for moving the display devices for improving the operation efficiency of a computer system, and of a user (See Fowler; col. 1, lines 44-49; and col. 3, lines 61-67). Claim 7 is dependent upon claim 6, and is rejected on the same reasons set forth in claim 6, and by the rational discussed above.

26. **Regarding claim 8**, Gouko-Crossland teaches a multi-monitor as discussed in claims 1, 4, and 6 above. However, Gouko-Crossland do not teach expressly the multi-monitor further comprising a first wiring which connects the image signal output device with the first display device, and a second wiring which connects the first display device with the second display device. Fowler also teaches the use of a first wiring 109 (a connecting ribbon wire 109) which connects the image signal output device 105 (the base member or the base computer 105) with the first display device 101 (the primary LCD 101), and a second wiring 116 (a connecting ribbon 116) which connects the first display device 101 with the second display device 120 (the side or secondary LCD 120). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the first and the second wirings connections as taught by Fowler in the device of Gouko-Crossland because this would provide a compact personal computer which has a plurality of displays panel so that the utility of a user of said computer is

improved (See Gouko, Col. 1, lines 12-13, and lines 57-60). Claim 8 is dependent upon claim 6, and is rejected on the same reasons set forth in claim 6, and by the rational noted above.

27. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gouko (U.S. Patent 6,222,507) in view of Crossland et al (U.S. Patent 4,720,781) (hereinafter referred to as "Gouko-Crossland") as applied to claims 1, 4 above, and further in view of Register (U.S. Patent 5,590,021).

Gouko-Crossland teaches generally all the limitation as discussed in claims 1 and 4. However, Gouko-Crossland do not teach expressly the multi-monitor further comprising a first image signal output device which outputs an image signal representing an image to be displayed on the display screen of the first display device, and a second image signal output device which outputs an image signal representing an image to be displayed on the screen of the second display device. Register teaches a multi-monitor system (See FIG. 1) including a first image signal output device 12 (a computer 12) which outputs an image signal representing an image to be displayed on the display screen 29 of the first display device 16 (the display monitor 16), and a second image signal output device 24 (a display controller 24) which outputs an image signal representing an image to be displayed on the screen 28 of the second display device 22 (a liquid crystal display module 22) (See FIGS. 1 and 2; col. 3, lines 28-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of using output devices as taught by Register in the device of Gouko-Crossland because this would provide an improved computer system having a secondary display which utilizes a minimum amount of desk space, and conveniently positioned in close proximity of the primary

display of the computer for increasing productivity (See Register, col. 1, lines 52; and col. 4, lines 36-40). Claim 5 is dependent upon claim 4, and is rejected on the same reasons set forth in claim 4, and by the rational discussed above.

***Conclusion***

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are:

- Rebeske (U.S. Patent 6,295,038) discloses a laptop computer having a second display screen hingedly secured to a first display screen;
- Kim (U.S. Patent 6,262,785) teaches a portable display having a main display 101 and a extension display 103;
- Batio (U.S. Patent 5,949,643) discloses a portable computer having pivotal display screen halves;
- Landau (U.S. Patent 5,745,340) teaches a computer system having a first display screen and an auxiliary display screen;
- Moscovitch (U.S. Patent 5,687,939) discloses a dual display system; and
- Failla (U.S. Patent 5,128,662) teaches a computer system having collapsible segmented display screens.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY N. TRAN whose telephone number is (703) 308-8410. The examiner can normally be reached on Mon - Fri from 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD A. HJERPE, can be reached at (703) 305-4709.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

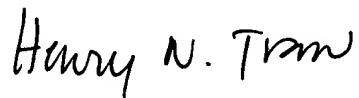
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**or faxed to:**

**(703) 872-9314 (for technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office Whose telephone number is (703) 306-0377.



HENRY N. TRAN  
Examiner  
Art Unit 2674

hnt  
November 30, 2001